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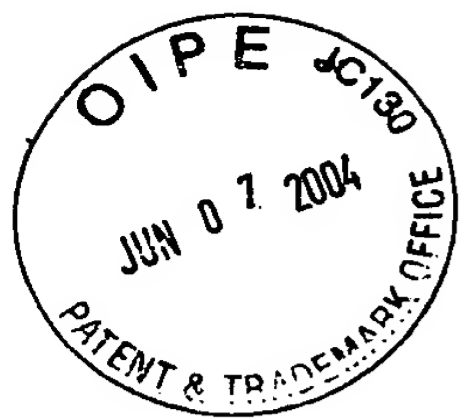
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THIOREDOXIN *h* CONSTRUCTS FOR TRANSFORMATION

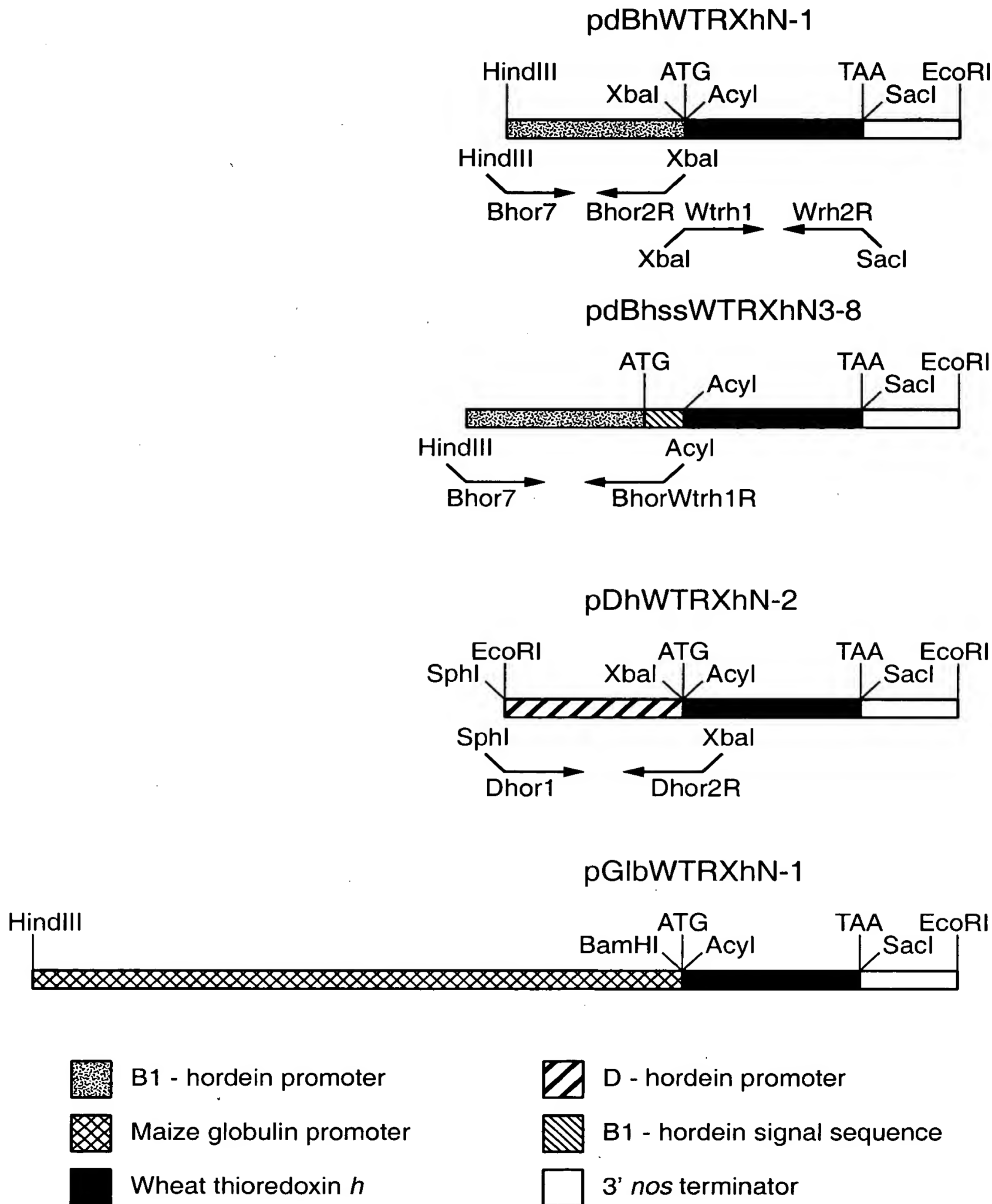
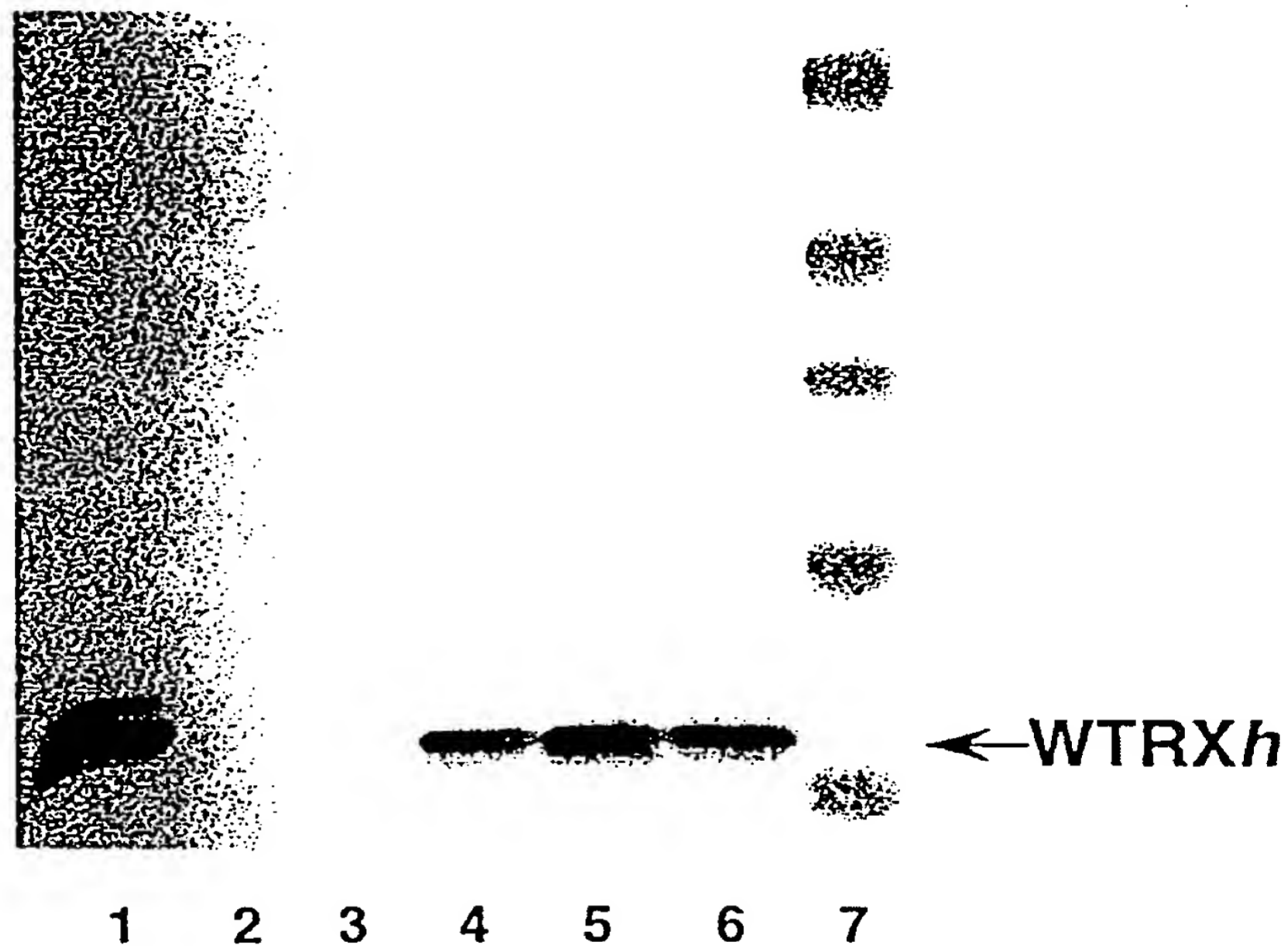


FIGURE 1



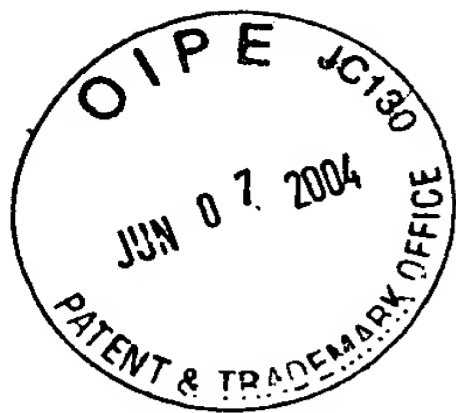
Western Blot Analysis of Barley Grain Transformed with Wheat Thioredoxin

SDS-PAGE: cv. Golden Promise



1. Wheat germ thioredoxin
2. Control (GP 4-96), nontransformed
3. Control, null segregant (GPdBssBarWtrx-29-11-10)
4. Transformed, heterozygous line (GPdBssBarWtrx-29)
5. Transformed, homozygous line 1 (GPdBssBarWtrx-29-3)
6. Transformed, homozygous line 2 (GPdBssBarWtrx-29-3-2)
7. Prestained standards

FIGURE 5



AAGCTTTAACAACCCACACATTGATTGCAACTTAGTCCTACACAAGTTTTCCATT
CTTGTTTCAGGCTAACAACCTATACAAGGTTCCAAAATCATGCAAAGTGATGC
TAGGTTGATAATGTGTGACATGTAAAGTGAATAAGGTGAGTCATGCATACCAAA
CCTCGGGATTTCTATACTTTGTGTATGATCATATGCACAACCTAAAGGGCAACTTT
GATTATCAATTGAAAAGTACCGCTTGTAGCTTGTGCAACCTAACACAATGTCCA
AAAATCCATTGCAAAAGCATCCAAACACAATTGTTAAAGCTGTTCAAACAAAC
AAAGAAGAGATGAAGCCTGGCTACTATAAATAGGCAGGTAGTATAGAGATCTA
CACAAGCACAAGCATCAAAACCAAGAAACACTAGTTAACACCAATCCACTATGA
AGACCTTCCTCATCTTTGCACTCCTCGCCATTGCGGCAACAAGTACGATTGCA

FIGURE 6

CTTCGAGTGCCCGCCGATTGCGCAGCAATGGCTAACAGACACATATTCTGCC
AAAACCCCGAGAACAATAATCACTTCTCGTAGATGAAGAGAACAGACCAAGAT
ACAAACGTCCACGCTTCAGCAAACAGTACCCCGAGAACTAGGATTAAGCCGAT
TACGCGGCTTTAGCAGACCGTCCAAAAAACTGTTTTGCAAAGCTCCAATTCC
TCCTTGCTTATCCAATTTCTTTTGTGTTGGCAAACCTGCACTTGTCCAACCGATT
TTGTTCTTCCCGTGTTTCTTCTTAGGCTAACTAACACAGCCGTGCACATAGCC
ATGGTCCGGAATCTTCACCTCGTCCCTATAAAAGCCCAGCCAATCTCCACAAT
CTCATCATCACCGAGAACACCGAGAACCAAAAACCTAGAGATCAATTCATTG
ACAGTCCACCGAGATGGCTAAGCGGCTGGTCCTCTTTGTGGCGGTAATCGTC
GCCCTCGTGGCTCTCACCACCGCT

FIGURE 7

**Effect of NTR on the Reduction of Proteins in Extracts of Wheat:
Transgenic line Over-expressing Thioredoxin h vs. Null Segregant**

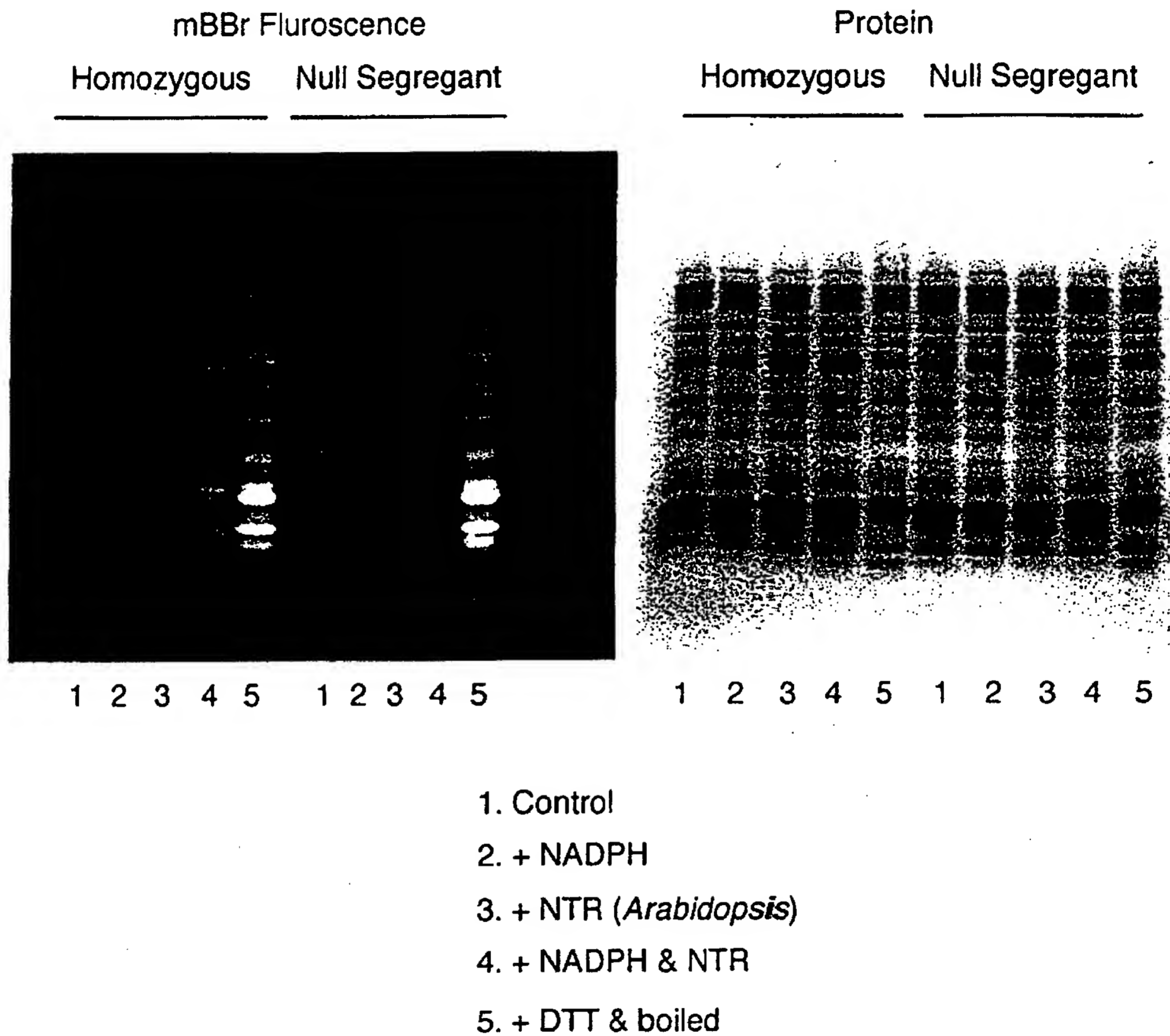


FIGURE 18

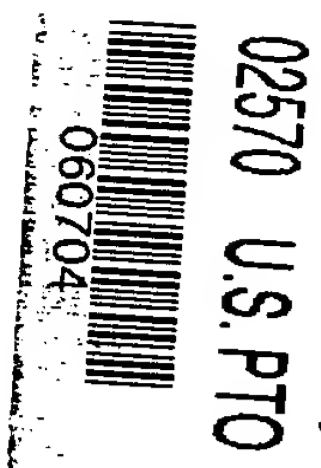


FIGURE 8A

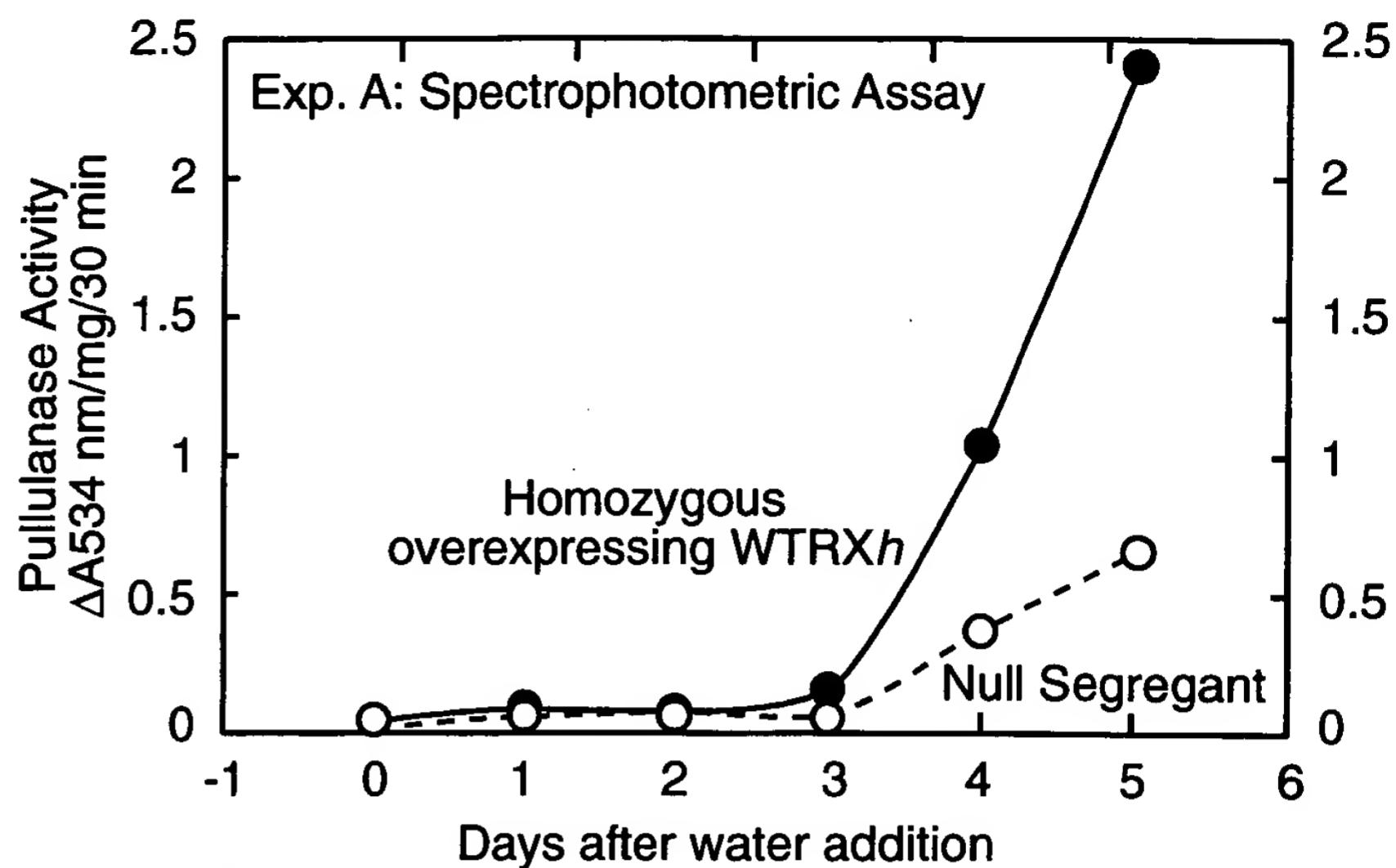


FIGURE 8B

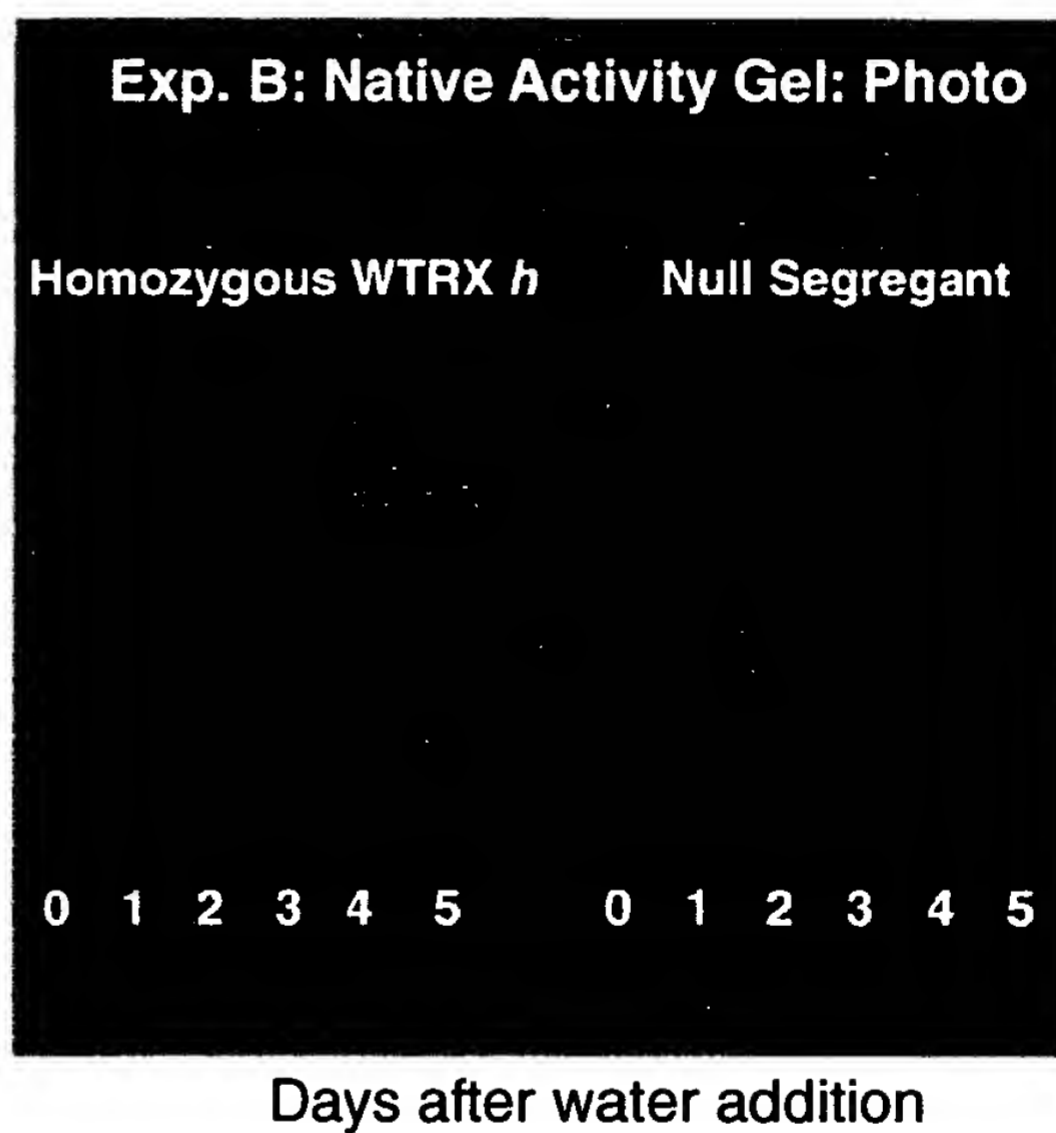
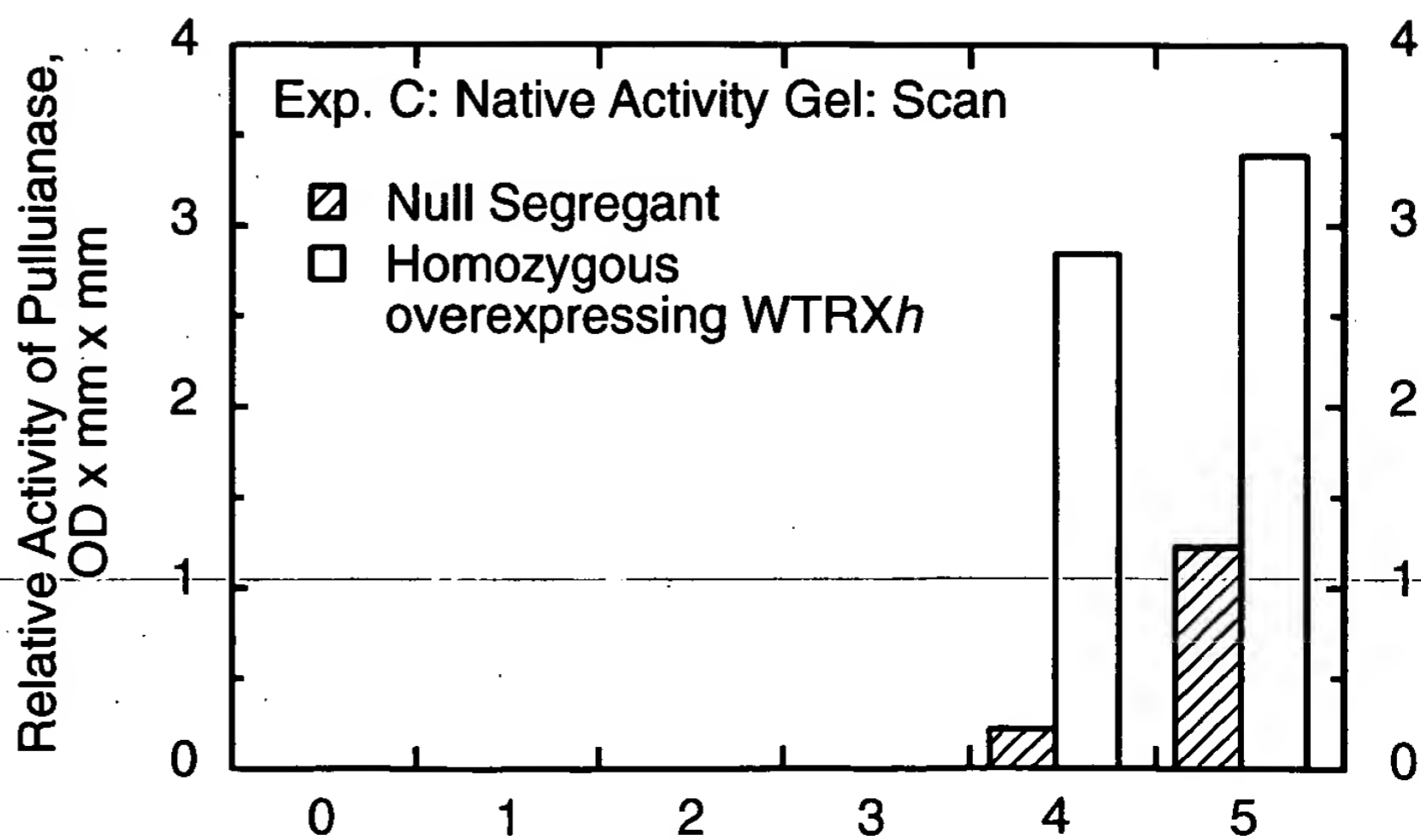


FIGURE 8C





Effect of Overexpressed Thioredoxin *h* on
Allergenicity of Proteins from Wheat Grain

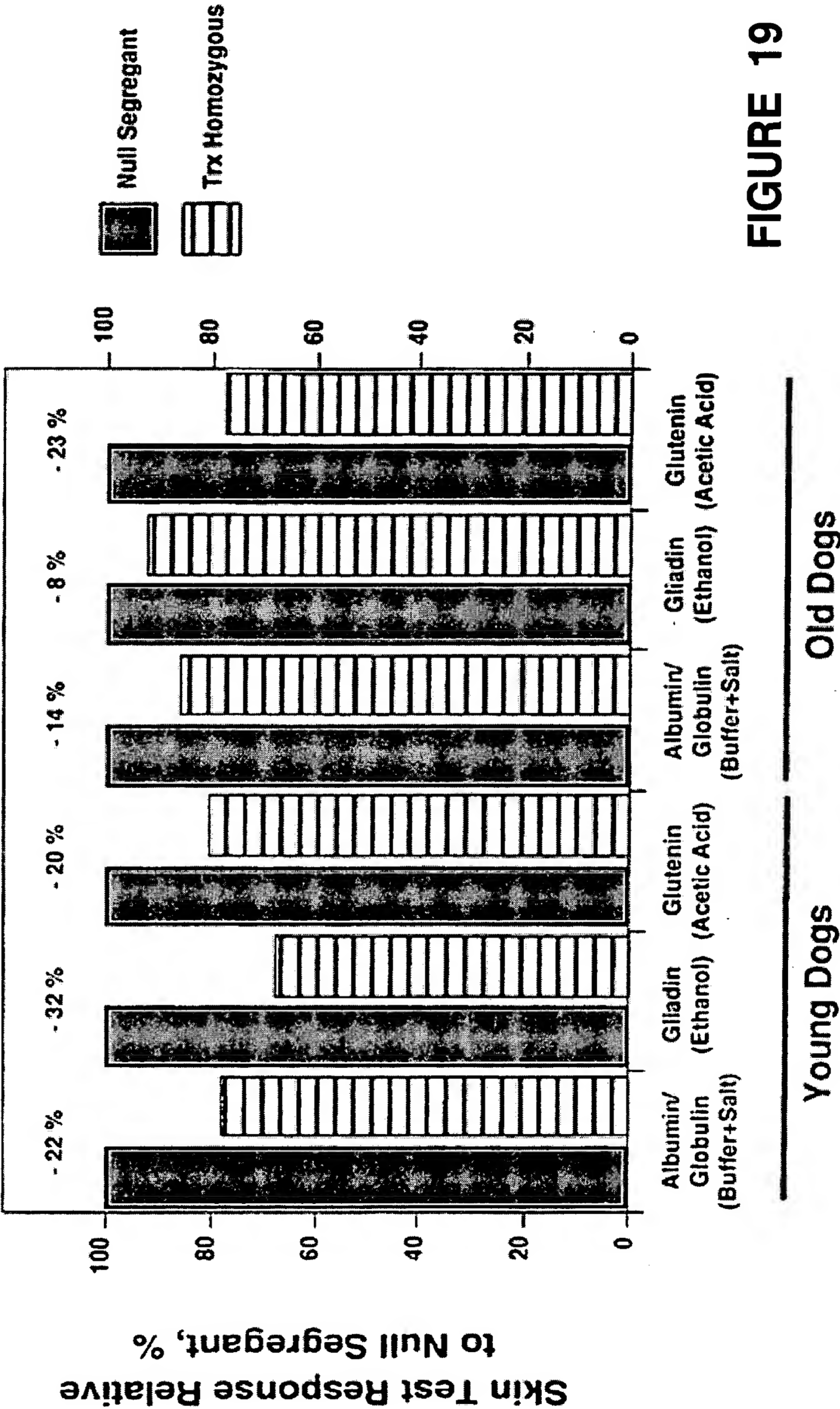
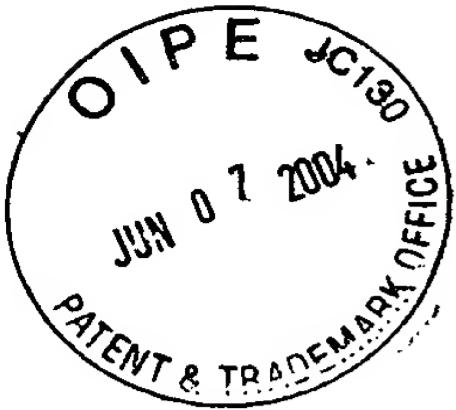


FIGURE 19



Different Relative Redox Status of Protein Fractions
in Transgenic Barley Grain Over-Expressing
Wheat Thioredoxin h vs. the Null Segregant:
Dry and Germinating Grain

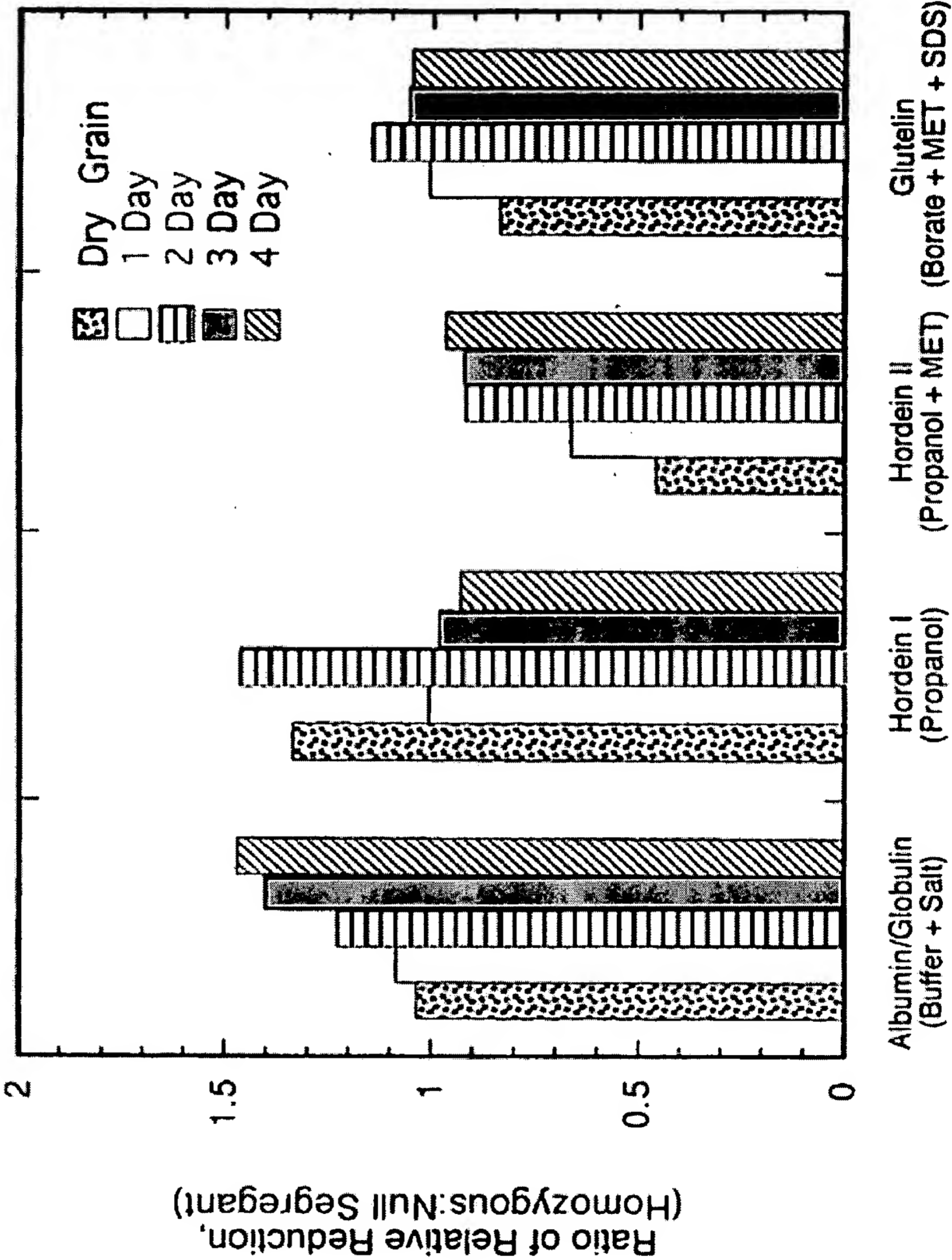


FIGURE 22

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Effect of Glucose-6-phosphate Dehydrogenase on the Reduction of Proteins in Extracts of Transgenic Wheat Grain Overexpressing Thioredoxin *h* in the Presence of Glucose 6-phosphate and Arabidopsis NTR: +/- NTR

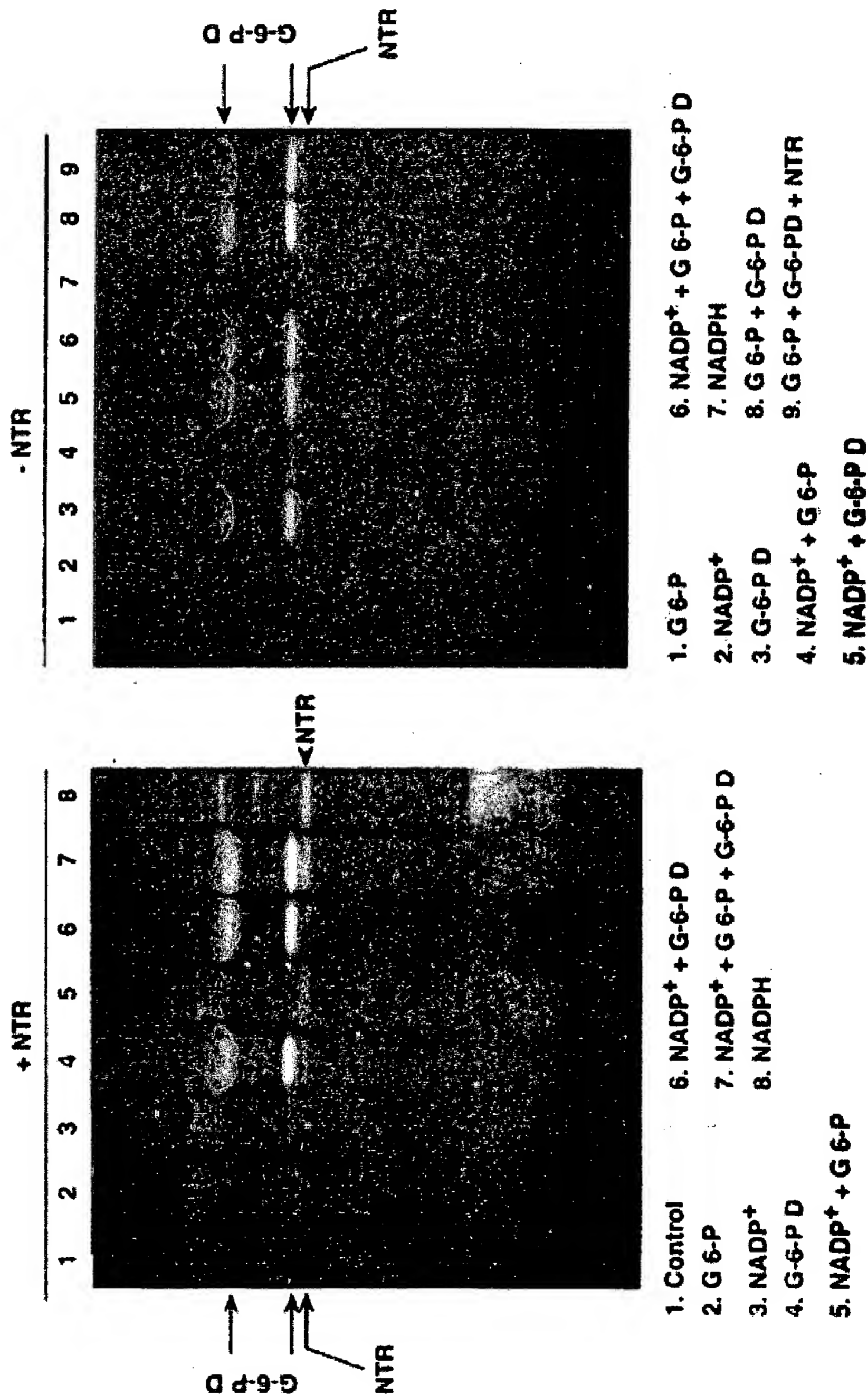


FIGURE 23